### D E L A W A R E R I V E R K E E P E R N E T W O R K

# 2022



The **Delaware Riverkeeper Network (DRN)** champions the rights of our communities to a Delaware River and tributary streams that are clean, healthy, free-flowing, and abundant with a diversity of life. DRN works throughout the four states of the Delaware River watershed, as well as at the federal level, when issues that impact the health of the Delaware River watershed play out on a national stage.



#### **OUR PROGRAMS**

- Advocacy Defending our River and communities from harm now and fighting for regulations that will provide protection in the future
- Litigation Pursuing legal action on behalf of the River and its affected communities
- Monitoring Detecting pollution and helping diagnose the health of our living River
- **Restoration** Implementing on-the-ground actions that are driven by, and measured against, benefits to the health of the waters of the Delaware River Basin
- Awareness Sharing information, tools, and training to help people protect local streams
- **River Tech** Providing technical assistance to watershed organizations, conservation groups, municipalities, agencies, and others to develop and implement watershed plans and projects

#### ABOUT THE DELAWARE RIVERKEEPER NETWORK

The Delaware Riverkeeper Network (DRN) is a Pennsylvania non-profit corporation. DRN's Entity Number, assigned by the Pennsylvania Department of State's Bureau of Corporations and Charitable Organizations, is 3813360.

DRN's Employer Identification Number (EIN) is 74-3255972.

DRN's registered office address (also the principal office address) is 925 Canal Street, Suite 3701; Bristol, PA 19007. This address is in Bucks County.

#### **BOARD OF DIRECTORS**

Jesse D. Thornburg, Chair Robert W. Meek, Vice- Chair Janine Bauer, Esq., Treasurer John P. Mikowychok Christina Perrone Alyssa Reynoso-Morris Maya K. van Rossum, the Delaware Riverkeeper / Chief Executive Officer

#### **FINANCIAL INFORMATION**

Our most recent financial information is availble online at <u>ProPublica's Nonprofit</u> <u>Explorer</u> or <u>Candid's 990 Finder</u>.

#### STAFF



#### Maya K. van Rossum, the Delaware Riverkeeper

The Delaware Riverkeeper is charged with giving a voice to the Delaware River, its tributaries, and all the communities that appreciate and depend upon them. In this role, the Delaware Riverkeeper is supported by:

Senior Leadership Tracy Carluccio, Deputy Director Kacy Manahan, Senior Attorney Chari Towne, Director, Grants & Operations Tim White, Chief Innovation Officer

#### **Complete Team**

**Molly Atz,** Assistant to the Delaware Riverkeeper

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### Saving the Atlantic sturgeon

A letter from the Delaware Riverkeeper



You don't win every fight, but – good or bad – you learn something from every outcome. We fought, and lost, the effort to deepen the Delaware River shipping channel to a depth of 45 feet so bigger ships could come up the River to Philadelphia and Camden. We researched that project extensively, submitted right-to-know requests, conducted file reviews, and documented the harms we knew would result. We organized opposition, held rallies, and pursued legal challenges. Sadly, we did not prevail.

From that fight we gained knowledge and gleaned data that informed other battles that have led to success, including a very important win that came in December 2022.

That was when the U.S. EPA headquarters decided to grant our petition that urged the federal government to promptly initiate rulemaking necessary to protect aquatic life in the Delaware Estuary, including the federally endangered Delaware River Atlantic sturgeon. This petition was filed in April 2022 by the Delaware Riverkeeper Network. We were joined in this work by Clean Air Council, Environment New Jersey, PennFuture, and PennEnvironment.

Our petition called out the Delaware River Basin Commission (DRBC) and the four Watershed states for failing to recognize that the Delaware Estuary, from Trenton to the top of the Bay, is being used by fish, like the Atlantic sturgeon, for spawning.

The EPA's December 2022 decision was a powerful and important one that may be a last best hope for saving our River's endangered Atlantic sturgeon population. We have been calling out our governmental agencies, including the DRBC, for failing to prioritize water quality and river protections essential for the maintenance and propagation of resident fish and other aquatic life, as well as for spawning and nursery habitat for anadromous fish.

It is extremely rare that EPA grants a petition of this kind. EPA's agreement that the DRBC has demonstrated an unwillingness to do the job necessary is both a powerful repudiation of the failed DRBC strategy and an acknowledgment of the perilous status of our Atlantic sturgeon. This victory grew out of work done every day over many years through participation on agency task forces and committees, specifically DRBC's Water Quality Advisory Committee, as well as our ongoing advocacy for the higher dissolved oxygen standards that are clearly required in the Clean Water Act.

In 2013, the Delaware Riverkeeper Network, the Delaware River Shad Fishermen's Association, and the Lehigh River Stocking Association submitted a petition to DRBC to upgrade the designated use of Delaware River Estuary Zones 3, 4, and River Miles 78.8 to 70.0 of Zone 5 to include propagation of fish and other aquatic life. Four years later, in 2017, the DRBC responded to that petition and our advocacy, passing a resolution to advance a review of aquatic life uses and start the process towards increased recognition of the Estuary 's use for fish propagation, dissolved oxygen restoration, and improvement of the Delaware Estuary. The DRBC's delays in acting, along with new data on dire population numbers for the Delaware River's Atlantic sturgeon, prompted our 2023 petition to the EPA.

Our Atlantic sturgeon need champions willing to pursue every path essential to their protection, as do our human communities who depend upon a healthy Delaware River. I am proud to say the Delaware Riverkeeper Network is an organization of such champions. We use independent advocacy, facts, science and the law to ensure the rich and healthy future that can only exist with a clean, healthy and free flowing river system.

We are able to do this important work because of the strength, resolve, and financial support that our members provide. Our members make all of our efforts and accomplishments, including protecting the Atlantic sturgeon, possible.

I am pleased to share highlights from our efforts in 2022 in this report.

Remember the River, Mayo 10. 100 Port

# Advocacy

Defending our River and communities from harm now and fighting for regulations that will provide protection in the future

#### **DISSOLVED OXYGEN STANDARDS**

The Delaware Riverkeeper Network played a lead role in a collaborative effort to press for complete and rapid adoption of full aquatic life (a.k.a. "fishable") protections and revised dissolved oxygen (D.O.) standards for the entire Delaware River. In December 2022, we achieved an extremely rare and decisive victory when U.S. EPA Headquarters granted our joint petition and issued an Administrator's Determination for that federal agency to supercede state and Delaware River Basin Commission (DRBC) authority and instead write protective D.O. criteria itself. With this determination, the EPA rejected the DRBC's support for industry-friendly and unprotective D.O. standards based on pollution loading and reaffirmed the singular role of biologically-based D.O. requirements when writing water quality standards.

#### FUNERAL FOR LOST STURGEON

In November 2022, The Delaware Riverkeeper Network and partners held a funeral for lost sturgeon to raise awareness of the plight of the Delaware River's sturgeon population. A coffin, made by local high school students and carried by four staff and volunteers, represented the four agencies responsible for bad regulations and allowing industrial projects that have led to the decimation of our Atlantic sturgeon population. We led the funeral procession around City Hall in Philadelphia with the coffin and wheelbarrows filled with 180,000 cards printed with an image of Atlantic sturgeon as well as sturgeon facts. These cards represented the sturgeon that have already been lost. A banner, also made by local students, represented the remaining 250 spawning adults. These sturgeon cards are now being distributed.



#### **BISHOP TUBE**

The Delaware Riverkeeper Network continued efforts to prevent construction of a residential development on the contaminated Bishop Tube site in East Whiteland Township, Chester County, Pennsylvania. We have been working with the community and partners to seek the clean up of the 13.3-acre site and secure its preservation as open space. The remedial action proposed by the Pennsylvania Department of Environmental Protection (PADEP) has failed to fulfill its regulatory, statutory, and constitutional obligations. The remediation plan also fails to meet antidegradation protections required for Little Valley Creek and associated Exceptional Value wetlands.

In 2022, we coordinated three community meetings to raise awareness of the contamination and development plan. In spring 2022, responding to concerns about a development proposal on an adjacent site, we submitted comment to PADEP regarding potential exacerbation of pollution at Bishop Tube and solicited input from an expert. Our advocacy on this issue resulted in prompt state response. Both our expert and PADEP determined that the development in question would not raise concerns for Bishop Tube. This reassured the community and helped ensure available resources remain focused on achieving the open space preservation goal.

At our organization's urging, PADEP tested for per- and polyfluoroalkyl substances (PFAS) at Bishop Tube in July 2022. Contamination was found at levels of significance.

In October 2022, the community screened a short documentary on Bishop Tube at the Colonial Theatre in Phoenixville, followed by a discussion with Delaware Riverkeeper Maya van Rossum and the film's director, Alex Djordjevic. Sen. Katie Muth and Rep. Kristine Howard, who were invited by the community, also attended.

#### WAREHOUSES

In 2022, the Delaware Riverkeeper Network worked throughout the Watershed to oppose new warehouse proposals that threaten ecologically sensitive areas like the forests of the Pocono Piedmont.

#### **DELAWARE RIVER**

We continued supporting the community opposing the 2.8 million square foot warehouse complex proposed for 600 acres of prime farmland in White Township, Warren County, New Jersey. In 2022, our efforts included identifying flaws in stormwater management designs, highlighting the impacts of building in karst geological regions, and raising up the impacts on threatened and endangered species and green, River-based jobs. We also petitioned the White Township Planning Board to deny the application without prejudice due to the applicant's multiple substantial changes and delays.



The Delaware Riverkeeper Network, our partners, and the community have attended Warren County meetings and been in contact with the County Commissioners regarding these warehouses.

Update: In February 2023, the Warren County Commissioners communicated to White Township conditions required for county roadway improvements associated with this development. These requirements create a high hurdle to overcome.

#### TUNKHANNOCK CREEK

We also opposed the construction of a 980,000 square foot warehouse (referred to as "115 Associates") on an undeveloped Pocono plateau site. We met with local community members to discuss strategy and grassroots organizing, attended a virtual April 2022 conditional use hearing on 115 Associates' plan, testified, and submitted comment. The warehouse received conditional use approval in May 2022, but many approvals remain with developers acknowledging the project could take up to two years. We also worked with local groups to install in-stream sensors to collect baseline data on Tunkhannock Creek water quality.

Another development proposal that threatens the Tunkhannock Creek is referred to as "115 Papillon and Moyer." This proposal, which includes a 100-acre warehouse and shopping complex, completely ignores stream buffer protections.

#### SAWKILL CREEK

When a 450,000 square foot warehouse/distribution facility was proposed for an intersection near I-84, the Delaware Riverkeeper Network responded. This location, in the Exceptional Value-designated Sawkill Creek watershed, sits atop the Milford Spring aquifer. We researched the proposed warehouse and created several action alerts. We also testified at multiple hearings in 2022, mentored a local community group, assisted with community outreach, coordinated with partners, and met with the Milford Water Authority, as well as land trusts to discuss potential for future preservation of this sensitive forested site.

In August 2022, the Milford Township Planning Commission, Pike County, Pennsylvania, voted not to recommend the conditional use application for this facility. Hearings on a variance application were held by the Zoning Hearing Board (ZHB) in November 2022.

Update: The ZHB and later Township Supervisors voted to deny the variance request for the facility. This was an important success. However, the developer may still appeal the decision or submit a revised plan in 2023.

#### **CAMP FIMFO**

In 2022, the Delaware Riverkeeper Network engaged with the proposal to convert the former Kittatinny Canoes site in Barryville, New York, into Camp FIMFO (for "Fun Is More Fun Outdoors"). This 223-acre site contains woodlands, steep slopes, and Delaware River frontage. Beaver Brook flows through the site. Much of the site is within the 100- and 500-year floodplains.

The proposal would transform existing low impact tent camp sites to RV sites, cabins or "glamping" structures with water, sewage and/or electric hook ups, add a mountain roller coaster, water slides, a swimming pool, mini golf, more parking, more septic systems, and replace some of the old existing buildings with new structures.

We have asked to see full and complete site plans and have called for environmental analyses, traffic assessments and economic information, including what the company will pay in taxes to support the many public services it will require, from the use of roads to emergency services and police support.

#### **BIOSOLIDS PROPOSED FOR PRESERVED FARM**

In 2022, the Delaware Riverkeeper Network worked with local residents and groups, including active and multi-generational farmers, to fight a proposal to spread sewage sludge (or biosolids) on a preserved farm in Plainfield Township, Northampton County, Pennsylvania. The Nazareth Municipal Authority (NMA) plans to spread biosolids from its sewage plant on the former Hower farm (preserved in 2008) which is in the Bushkill watershed.

Spreading sewage sludge provides an uncontrollable pathway for toxic pollutants, including per- and polyfluoroalkyl substances (PFAS), to enter the air, groundwater, and a High Quality-designated Bushkill Creek tributary. Our activities on this issue included researching agricultural easements, conference calls and research sharing with local residents, requests to NMA for the Hower farm conservation plan, records requests to Nazareth Borough Council, Right-to-Know requests to the Pennsylvania Department of Environmental Protection for permits and documents for the Nazareth Wastewater Treatment Plant (WWTP), hosting Zoom meeting with local residents and stormwater expert Meliora Design to share how to record stormwater runoff events, and exploring strategies that will conserve the farm and prevent pollution. We also submitted comment to the Delaware River Basin Commission (DRBC) on the Nazareth WWTP docket supporting UV treatment over chlorine discharge and correcting several errors in the Docket, which DRBC accepted as permitting changes.

#### TRANSCO'S REGIONAL ENERGY ACCESS EXPANSION PROJECT

The Delaware Riverkeeper Network is challenging a new pipeline project in the Watershed proposed by Transcontinental Gas Pipe Line Company, LLC (Transco). The Regional Energy Access Expansion Project (REAE) involves

the construction of new pipelines in Luzerne and Monroe Counties, Pennsylvania, a new compressor station in Gloucester County, New Jersey, and several modifications to compressor and metering facilities in Pennsylvania and New Jersey.

In 2022, we submitted comments to the Federal Energy Regulatory Commission (FERC) on their Draft Environmental Impact Statement raising issues concerning climate change and impacts to water resources. Along with Citizens for Pennsylvania's Future (PennFuture), Clean Air Council, Brodhead Watershed Association, Tobyhanna Creek/Tunkhannock Creek Watershed Association, and the Aquashicola Pohopoco Watershed Conservancy, we submitted comments to the Pennsylvania Department of Environmental Protection (PADEP) urging the denial of permits requested by Transco that would allow for multiple stream and wetland crossings in special protection waters.

Update: The REAE Project received a certificate of public convenience and necessity from FERC in January 2023. The Delaware Riverkeeper Network petitioned the U.S. Court of Appeals for the D.C. Circuit for review of FERC's decision. PADEP also issued permits to Transco. The Delaware Riverkeeper Network and PennFuture have appealed those permits to the Pennsylvania Environmental Hearing Board.

#### **FERC POLICY**

In February 2022, the Federal Energy Regulatory Commission (FERC) released a new Certificate Policy and draft interim Greenhouse Gas (GHG) Policy, both of which include recommendations drawn from the Delaware Riverkeeper Network's extensive comments submitted in 2018 and 2021, including a greater emphasis on environmental justice concerns in the review process, and greater consideration of upstream and downstream climate changing emissions. We also submitted reply comments on FERC's draft Updated Certificate Policy and GHG Policy.

The draft GHG policy represented an improvement on the current process. However, we identified gaps and concerns. We prepared comments to address these gaps, priming us to legally challenge or defend the final GHG policy if needed. We submitted comments in April 2022, urging the agency to adopt a regional approach to evaluating natural gas development, to consider climate change when determining project need, and to increase public involvement in natural gas infrastructure decisions.

h FEDERAL ENERGY REGULATORY COMMISSION

#### **DELAWARE RIVER BASIN COMMISSION FRACK BAN**

The Delaware Riverkeeper Network continued working with our Frack Ban Coalition partners in 2022 to advocate for a full ban on fracking throughout the Watershed. The Commissioners, who are the voting members of the Delaware River Basin Commission (DRBC), were our primary targets for this effort. They are comprised of the governors of the four Watershed states and the federal representative, the U.S. Army Corps of Engineers. Our Coalition appealed to the Commissioners, as well as the DRBC staff and professionals. All of these people are constituents as well as community members. We asked them to expand the current ban on fracking in the watershed to include a ban on the import and discharge of fracking wastewater and the export of water from the Basin for fracking in other regions.

Along with our Coalition partners, we attended all DRBC business meetings to bring to the Commissioners new reports and emerging information on fracking wastewater and water use issues, with individual Coalition members presenting an organized series of substantive points. We carried out a summer/fall campaign in 2022 to keep the draft regulations before the Commissioners with the circulation of a sign-on letter for organizations and individuals calling for the draft rules to be revised to require the full fracking ban expeditiously. On December 5, 2022, the letter – signed by 191 organizations and 7,575 individuals – was delivered to the Commissioners. Despite these efforts, the Commissioners adopted a rule in December 2022 that did not categorically ban the import of fracking wastewater, nor did it fully ban water withdrawals for fracking elsewhere.

Update: The Delaware Riverkeeper Network continues to monitor DRBC applications, proposed Dockets, and other waste disposal permit applications for any proposals to import fracking wastewater or export water for fracking in order to catch any such proposals early, investigate them, and develop opposition campaigns.

#### LNG BY RAIL, THE PROPOSED GIBBSTOWN LNG EXPORT TERMINAL, AND THE TRUMP RULE

Throughout 2022, Pipeline and Hazardous Materials Safety Administration (PHMSA) delayed the adoption of the suspension rule that would reverse the Trump Administration's authorization of transport of liquefied natural gas (LNG) by rail (referred to as the "Trump Rule"). The Biden Administration proposed suspending the Trump Rule. A public comment period was completed in late 2021, but PHMSA delays left the Trump Rule in effect in 2022.

The Delaware Riverkeeper Network and the Stop LNG by Rail Coalition advocated for the suspension rule to be adopted, the adoption of a final replacement rule that reinstates the LNG-by-Rail ban that had been in place prior to the Trump Administration, and the denial of the Special Permit, approved in 2019, that allows the transport of LNG-by-rail from Wyalusing to Gibbstown.

Our advocacy actions included petitions, webinars and forums, community meetings, sign-on letters by elected officials, municipal resolutions, and other tactics that highlight the dangers of rail transport.

The Delaware Riverkeeper Network, represented by Earthjustice, is also legally challenging the Trump Rule.

Update: On April 24, PHMSA published in the Federal Register notice of their decision to deny the request to renew the Special Permit issued for the transport of LNG by rail from the proposed Wyalusing liquefaction plant to Dock 2 at Gibbstown. The applicant can reapply and, until PHMSA suspends the Trump rule on LNG transport, theoretically LNG can be moved by rail. However, this decision will affect the future viability of the Dock 2 LNG export facility. We continue to oppose permits that support the proposed LNG export terminal at Gibbstown. The LNG project is temporarily on hold and still needs several permits but the owners continue to press for approvals.

# Litigation

#### Pursuing legal action on behalf of the River and its affected communities RIVER RESOURCES LAW CLINIC'S 20TH ANNIVERSARY

Since 2002, more than 100 future lawyers have gained experience in public interest environmental law through the Delaware Riverkeeper Network's River Resources Law Clinic (RRLC). Past interns have found employment in the U.S. Attorney's Office for the Eastern District of Pennsylvania, the U.S. Department of Justice, and the U.S. Environmental Protection Agency. RRLC interns have also gone on to work for law firms, both small and large, throughout the region including some of the top firms in environmental law. In 2022, the Delaware Riverkeeper Network committed to offering paid summer legal internships, and brought on board our first summer intern in this role. Paid internships help to remove a financial barrier that might otherwise prevent rising second and third-year law students from seeking experience in public interest environmental law.

#### **NOAA FISHERIES BIOLOGICAL OPINIONS**

In July 2022, the Delaware Riverkeeper Network sent a 60-day notice of intent to sue the National Marine Fisheries Service (NMFS), also known as NOAA Fisheries, for violating multiple sections of the Endangered Species Act. These violations concern the Biological Opinions issued to the U.S. Army Corps of Engineers for the New Jersey Wind Port project and the Edgemoor Container Port project. Those Biological Opinions failed to use the best available science to estimate the number of vessel strikes caused by ship traffic. NOAA Fisheries has re-initiated consultation with the Army Corps concerning these projects to include the updated science. Depending on the outcome of consultation, we may need to challenge NOAA's and the Army Corps' use of vessel strike data. If permitted by the Army Corps, these commercial ports could threaten the continued existence of the Delaware River's genetically unique population of Atlantic sturgeon.

#### **RECREATION DATA RIGHT-TO-KNOW APPEAL**

In August 2022, the Delaware Riverkeeper Network appealed the Philadelphia Water Department's (PWD's) denial of our Right-To-Know (RTK) request for information relating to recreational use of the River.

PWD and others dischargers have pushed back against the Safe and Healthy Delaware River petition, which was submitted by the Delaware Riverkeeper Network and partners. This petition requests an upgrade of the designated use of Zone 3 and River Miles 95.0 to 81.8 of Zone 4 of the Delaware Estuary to include primary contact recreation.

PWD and other dischargers have asserted that, despite improved water quality, this reach of the River would still not be safe for primary contact recreation due to ship traffic. Our RTK requested information from PWD on vessel strikes, hazards, collisions or near-collisions, or incidents of any kind regarding recreational uses of the Delaware River – including, but not limited to, kayaks, canoes, recreational boats, jet skis, swimmers, fishers, and waders – and maritime fishing traffic including, but not limited to, those from barges, tanker vessels, and container ships.

In November 2022, our appeal of PWD's RTK denial was granted. PWD was ordered to provide us with responsive documents within 30 days. DRN received the requested data in December 2022.

#### STANDARD FOR AWARDING FEES UNDER THE CLEAN STREAMS ACT

The Delaware Riverkeeper Network, Clean Air Council (CAC), and Mountain Watershed Foundation (MWA) submitted a reply brief in the Pennsylvania Supreme Court case regarding standards for awarding fees under the Clean Streams Act. This case concerned CAC's efforts to seek payment from Sunoco Pipeline, L.P. for legal fees and costs in its successful Mariner East 2 permit appeal.

CAC appealed first to the Environmental Hearing Board (EHB) seeking fees from Sunoco for its legal work in the 2017 appeal. The EHB rejected CAC's appeal (as well as an appeal from Sunoco). In its decision, the EHB made it more difficult for community groups to seek legal fees from private permittees pursuing legal action in the public interest by requiring prevailing parties to prove that a permittee acted in bad faith or for an improper purpose. CAC appealed to the Commonwealth Court where a split decision in 2021 affirmed the EHB decision. The Pennsylvania Supreme Court heard argument in the case in March 2022.

Update: In February 2023, the Pennsylvania Supreme Court reversed the lower court, opening the door for the Delaware Riverkeeper Network, CAC, and MWA to seek reimbursement of costs for legal work in the 2017 appeal. The Supreme Court held that the bad-faith limitation was inconsistent with the Clean Streams Law, which empowers citizens and organizations with the ability to pursue legal action to ensure compliance.

#### **GIBBSTOWN LOGISTICS CENTER**

The Delaware Riverkeeper Network continued to lead opposition to a liquefied natural gas (LNG) export facility proposed for the Gibbstown Logistics Center (GLC), located on the Delaware River in Gibbstown, New Jersey.

The project is not yet built, stalled by both public opposition and legal challenges that have delayed construction of key components of the terminal. However, the project developers, Delaware River Partners, LLC (DRP), continue to seek new permits or defend in court its ongoing efforts to construct this LNG export terminal (also referred to as Dock 2).

We appealed the Delaware River Basin Commission (DRBC) approval for Dock 2 in federal court. We also filed a lawsuit challenging the approval by the U.S. Army Corps of Engineers based on violations of the National Environmental Policy Act review process, which is stayed pending resolution of whether the Federal Energy Regulatory Commission (FERC) has jurisdiction over the proposed LNG export facility.

We are participating in three separate petitions for declaratory orders currently pending before FERC concerning the Commission's jurisdiction over the Wyalusing-to-Gibbstown export scheme. Our organization also appealed to the Superior Court of New Jersey, Appellate Division, approval of land use permits granted by New Jersey Department of Environmental Protection (NJDEP) for the GLC's rail loop. That appeal is fully briefed and awaits a decision from the court.

DRP has also submitted permit applications for the building of two new caverns for the storage of liquid petroleum gases at the terminal. The Delaware Riverkeeper Network submitted extensive comments to NJDEP on this proposal, as well as the underlying regulations.

Update: In March 2023, the U.S. District Court for the District of New Jersey upheld DRBC's issuance of approval.

#### DELAWARE RIVER BASIN COMMISSION FRACK BAN CHALLENGE

In March 2022, Delaware Riverkeeper Network attorneys argued before the U.S. Court of Appeals for the Third Circuit that a group of Pennsylvania Republican lawmakers and a handful of municipalities warped the meaning of Article 1 Section 27 of the Pennsylvania Constitution (Pennsylvania's Environmental Rights Amendment) to support standing in their challenge to the Delaware River Basin Commission's ban on high volume hydraulic fracturing (also referred to as "fracking"). The Appellants claimed that their inability to collect fees from potential frack wells within the Basin was an injury to the environmental trust, and that they had standing in court to "regain control" of trust property, meaning gas reserves within the Basin. We explained to the court that the Appellants were incorrectly advocating for a proprietary view of the public natural resources, and that the Environmental Rights Amendment protects environmental values, not monetary value.

In October 2022, the court affirmed a lower court decision dismissing the lawmakers legal challenge. The judges determined that the fracking ban furthered the purposes of the trust by protecting the natural resources of the Commonwealth as mandated by Article 1 Section 27, and that the Appellants' interpretation of Article I, Section 27 was incorrect.

#### TINICUM CREEK AND HEADQUARTERS ROAD BRIDGE

In 2022, Delaware Riverkeeper Network attorneys attended mediation regarding our challenge to the National Park Service's Section 7 determination under the Wild and Scenic Rivers Act for the Headquarters Road Bridge. This mediation involved the Pennsylvania Department of Transportation (PennDOT), the Delaware Riverkeeper Network, and a neighbor.

We are challenging the demolition and replacement of a historic bridge over the Exceptional Value-designated Tinicum Creek. Under PennDOT's current design, the bridge demolition and replacement would result in severe erosion of the riparian area next to the stream and impact water quality through sedimentation.

We are also challenging the Pennsylvania Department of Environmental Protection's issuance of Chapter 105 permits to PennDOT. This case is before the Environmental Hearing Board. In March 2022, we filed a supersedeas petition and we presented the imminent harms that would occur at a hearing. However, our petition was denied. Pre-Hearing Memoranda were filed. A hearing was scheduled to begin in January 2023, but in December the hearing was continued to a date to be determined later due to ongoing efforts by our organization and community members to rehabilitate the bridge.

# Monitoring

### Detecting pollution and helping diagnose the health of our living River

#### HORSESHOE CRAB COUNTS

In 2022, the Delaware Riverkeeper Network, with the help of trained volunteers, conducted 12 nights of horseshoe crab counts and tagging on Moores Beach, New Jersey, on the Delaware Bay. This work, done in conjunction with the U.S. Fish and Wildlife Service (FWS) and American Littoral Society, is part of a Delaware Bay-wide survey to assist with horseshoe crab protections.

The Delaware Riverkeeper Network tags 300 horseshoe crabs annually. We also led 30 Moores Beach crab ReTurn the Favor (RTF) rescues walks and 2 daytime emergency rescues in 2022 after high tides/storm surges stranded hundreds of crabs in back bay marshes. We recorded rescues of over 300 crabs per walk, among the highest counts recorded for all beaches.

Over 20 volunteers helped with horseshoe crab counts and tagging, learning about how this work supports our advocacy for continuation of the moratorium on harvest in New Jersey. Delaware prohibits harvest of female horseshoe crabs, but does allow harvest of male crabs from June to December.

#### **PIPELINE MONITORING**

In September 2022, the Delaware Riverkeeper Network conducted a two hour virtual training for residents of Pennsylvania and New Jersey concerned about the replacement of a diesel pipeline that runs under the Delaware River in the vicinity of Jacobs Creek in New Jersey. During this program, volunteers from both sides of the River were taught how to watchdog this pipeline replacement project that would be carried out using horizontal directional drilling (entry on Pennsylvania side, exit on New Jersey side) with tree clearing in New Jersey. Drilling began in early October 2022 and ran through the winter months. Local monitors and Delaware Riverkeeper Network staff tracked the project impacts while it was ongoing.

#### **DISSOLVED OXYGEN SURVEYS**

Between July and October 2022, the Delaware Riverkeeper Network conducted three dissolved oxygen (D.O.) surveys in the Tohickon Creek tailwaters, just downstream of the Lake Nockamixon reservoir outlet. These surveys

were timed to coincide with deep releases from Lake Nockamixon into the lower Tohickon. We found that cold, deep-release water is well-oxygenated (above 9 mg/L of D.O.) and that low oxygen conditions were never present in the reservoir's tailwaters. These high dissolved oxygen and cold temperature conditions existed in both summer and early fall, and during both afternoon and pre-dawn surveys.

We also measured water temperature at eight stations on the Tohickon Creek between Lake Nockamixon and Point Pleasant, PA, which is 11 miles below the reservoir and near the Tohickon's confluence with the Delaware River. Both continuous water quality probes (recording every 5 minutes) and individual paired spot measurements of temperature were used to establish the patterns of water temperature variability through summer and early fall on the lower Tohickon.

These results indicate that the coldwater releases from Lake Nockamixon can provide significant temperature benefits to the Tohickon Creek for at least five miles below the reservoir, even under the current drought-like conservation release rate of 11 cubic feet per second. This study highlights the potential for improved water quality, ecological, and recreational conditions in the lower Tohickon should an environmental flow regime with higher release rates be implemented during periods of high reservoir storage.

### Restoration

Implementing on-the-ground actions that are driven by, and measured against, benefits to the health of the waters of the Delaware River Basin

#### **BIG CREEK, SCHUYLKILL COUNTY, PENNSYLVANIA**

Delaware Riverkeeper Network's Big Creek project, undertaken during 2021 and 2022, sought to restore the pH regime for the mainstem of this Schuylkill County waterway. The project involved limestone sand application to the outlet from an acidified and flooded former coal strip mine. Typical pre-restoration pH values ranging from 4.5 to 4.9 have now been improved so that the restored sections of Big Creek experiences pH in the circumneutral range of 6.5 to 7.0, with only minor dips below 6.5 during storm events.

The deployment of multiple continuous pH sensors in the Big Creek watershed was vital to understanding the spatial and temporal extent of pH impairments and pH recovery following limestone applications. In particular, the continuous pH sensors allow the project team to monitor the acutely stressful pH excursions that are experienced in spring during snowmelt and spring storms as well as other times of year.

The restoration of Big Creek water quality has been accompanied by a strong resurgence in benthic invertebrates, with nearly 60 unique taxa now documented in the recovered stream reaches (less than 10 taxa had been documented historically), and with the sensitive mayflies returning with persistent year-round populations and a taxa richness of at least

seven different mayfly groups. Similarly, native brook trout have been reintroduced to the restored sections of the Big Creek watershed, with further plans to expand their reintroduction to all restored reaches in 2023.

While restoration and monitoring did document impressive restoration and recovery in this watershed, the water quality and biological assessments also uncovered a new problem in the Big Creek and Schuylkill headwater region. Decades of acid deposition on the Pottsville geologic formation has led to severe and chronic acidification of soils, forests, groundwater, and all surface waters. Typical pH conditions beyond the areas impacted by coal mining show pH values in streams ranging from 4.3 to 4.9, far too acidic for healthy biological communities or for the survival of native brook trout.

The project team was able to adapt its monitoring program to explore this unexpected pattern for region-wide acidification and delineate the areas affected and those areas in geologic formations (e.g., Mauch Chunk) where the same exposure to acid deposition has not left the soils and streams devoid of acid neutralizing capacity.

The Big Creek watershed now serves as a key research setting for testing approaches to neutralize multiple sources of acidification to waters and watersheds.

#### **NEWTON CREEK, CAMDEN COUNTY, NEW JERSEY**

In a small project with a big payoff, the Delaware Riverkeeper Network worked with members of PowerCorps Camden to plant 10 trees at Mae Shultz Memorial Park. PowerCorps Camden provides young leaders, ages 18 to 26, with handson experience tackling environmental challenges in their community. The Delaware Riverkeeper Network regularly works with PowerCorps Camden, sharing information on the maintenance of green stormwater infrastructure (rain gardens, riparian buffers, etc).

At Mae Shultz Memorial Park, the young leaders from PowerCorps Camden were given the opportunity to become the teachers for a team of 5th graders, their teachers, and parents on how to properly plant a tree. The members of PowerCorps Camden also shared their concern for the environment. PowerCorps Camden is now reaching out to other Camden schools to expand their tree planting activities.

### **Awareness**

### Sharing information, tools, and training to help people protect local streams

#### DINO IN THE DELAWARE AD CAMPAIGN

In 2022, the Delaware Riverkeeper Network carried out efforts to raise public awareness of the plight of our unique and endangered population of Atlantic sturgeon. Our efforts included a media campaign for which we ran 15- and 30-second videos on Facebook, Instagram and YouTube. We took out a billboard ad that ran for 10 weeks. We also set up www.dinointhedelaware.org, a new website with information about Atlantic sturgeon, which launched in February 2022



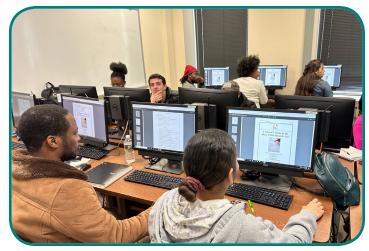
#### WATERSHED CONGRESS

In a Watershed Congress special event, the 2022 program shone a spotlight on the 50th Anniversary of the Clean Water Act. The Delaware Riverkeeper Network, which chairs the Watershed Congress Organizing Committee, recruited environmental leaders from across our region to present in depth looks at the promise of the Clean Water Act, the effectiveness of its implementation to date, what it has meant for our communities, and the future of ongoing efforts and advocacy to secure truly fishable and swimmable waters.



#### **OPEN PUBLIC RECORDS ACT TRAINING**

The Delaware Riverkeeper Network and Clean Water Action-New Jersey worked with a Trenton-area academic institution to offer environmental advocacy training to adult English as a Second Language students who are recent immigrants. Topics included how to submit an Open Public Records Act request at local, county, and state levels in New Jersey, how stormwater permits impact local communities, what local residents can do to improve stormwater permit compliance, how to use mapping tools, how to develop a watershed driving tour, and how to conduct door-to-door canvassing and its value for community organizing.



## **River Tech**

Providing technical assistance to watershed and conservation groups, municipalities, agencies, and others to develop and implement watershed plans and projects

#### **BUFFER RESTORATION & AFFORESTATION IN UPPER DARBY**

In 2022, the Delaware Riverkeeper Network continued to provide technical assistance to the Upper Darby Parks Department and Shade Tree Commission as well as to grassroots community groups such as Tree Tenders of Upper Darby and the Darby Creek Valley Association. We helped local representatives, volunteers, and community organizers to plan, implement, monitor, water, and maintain Phase 2 of an ongoing riparian native buffer restoration and afforestation project along the Darby Creek. This unique project, located at Gillespie Park in Upper Darby, PA, is using goats/goat herbivory, followed by invasive plant control days with human volunteers, to curb invasive plant species in the buffer and to clear the way for native trees and shrubs. Prior to the implementation of Phase 2, this area was largely choked with porcelainberry and Japanese knotweed.

Over 120 native trees and 40 native shrubs were planted in Fall 2022 to add to the 400 trees/shrubs planted in 2021 in Phase 1. The first phase of the project included removing an underutilized baseball field to widen the forested buffer. To enhance biodiversity and add to the resilience of the buffer, 16 species of native trees and 11 species of native shrubs were incorporated into the buffer design. Native riparian buffer seed mix was also seeded to assist with competition from invasive species and to begin creating meadow habitats and soft landings for pollinators. Soft landings are native plants located under native trees that ensure that pollinators like moths, butterflies, and beneficial insects have the shelter and habitat they need for all stages of their life cycle.

#### **EASTWICK FRIENDS & NEIGHBORS COALITION**

In 2022, the Delaware Riverkeeper Network continued to work with the Eastwick Friends and Neighbors Coalition (EFNC), which celebrated its 10th year of advocating for the community. Together, we engaged in the redevelopment of the former Philadelphia Energy Solutions refinery site being undertaken by the Hilco Corporation. Challenges still exist to ensure thorough site remediation, public access, and fair compensation for this environmental justice community.

EFNC and the Delaware Riverkeeper Network also remain engaged in the complex issue of setting aside a portion of the 128-acre parcel saved from the development for a land swap to benefit a group of Eastwick residents currently living in the "sinking homes," homes built on fill.



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